

AMENDMENTS TO THE SPECIFICATION:

Please add the following new paragraphs after the first full paragraph on page 7 of the specification describing Fig. 1:

--FIG. 1A is a perspective view of an implant having arcuate surfaces and an end cap in accordance with an embodiment of the present invention.

FIG. 1B is a top elevational view of an implant having a leading end, a trailing end, and sides forming a circle in accordance with an embodiment of the present invention.

FIG. 1C is a graphical representation of a motion preserving device in accordance with an embodiment of the present invention. --

Please add the following new paragraphs after the sixth full paragraph on page 8 of the specification describing Fig. 18:

--FIG. 18A is an enlarged fragmentary side view of a groove having a U-shape in accordance with an embodiment of the present invention from a view taken along area 18A of FIG. 18.

FIG. 18B is an enlarged fragmentary side view of a groove having a box-shape in accordance with an embodiment of the present invention from a view taken along area 18B of FIG. 18.

FIG. 18C is an enlarged fragmentary top plan view of a plurality of surface projections spaced apart from one another in accordance with an embodiment of the present invention.--

Please replace the paragraph bridging pages 10 and 11 of the specification with the paragraph below:

In this embodiment of surface configuration 120, a plurality of surface projections 122 are spaced apart laterally (side to side) by longitudinal grooves 130 formed along the longitudinal axis L of implant 100. In one embodiment, longitudinal grooves 130 have a V-shaped horizontal cross-section. The lower

most portions of left and right side facets 132, 134 of consecutive side-by-side projections 122 can be coincident with each other or may be spaced apart, any space therebetween can be at least in part flat, curved, sloped or otherwise configured. Each surface projection 122 has left and right side facets 132, 134 that converge to form a high point or peak 136 at the top of each surface projection 122. Each peak 136 can be aligned along lines that are perpendicular, parallel, and/or diagonally oriented to longitudinal axis L of implant 100. The left and right side facets 132, 134 resist side-to-side motion of implant 100 after it is inserted into the implantation space. Peaks 136 engage the bone of vertebral bodies V adjacent to implant 100 in the implantation site. It is appreciated that in a variation of the present invention, the peaks may be modified such as to be truncated or cut off to have a broader rather than ~~sharper~~ shaper upper most surface. Moreover, the peaks can be cleaved in one or more directions so as to increase the surface area useful for engaging the bone of the vertebral bodies. The relieved areas of the cleaved projections are useful for containing and carrying fusion promoting substances other than bone such as bone morphogenetic proteins and genetic materials coding for the production of bone, or bone itself which could by way of example be in the form of a paste. It is further appreciated that for all the various embodiments of the surface configuration of the present invention, longitudinal grooves 130 can have horizontal cross-sections in a variety of configurations such as, without limitation, square-shaped or U-shaped configurations.

Please replace the paragraph bridging pages 11 and 12 of the specification with the paragraph below:

Sequential projections can be positioned on an implant wherein each surface projection has forward facing facets facing the same direction such that consecutive projections are oriented forward facing facet to rearward facing facet. The lower most portion of the slope of the forward facing facet of a first surface projection in a sequence can be coincident with the rearward facet of the

next surface projection in the sequence. Alternatively, the forward facet of a first surface projection and the rearward facet of the next surface projection in a sequence can be spaced apart and the space can be at least in part flat, curved, or any other surface configuration suitable for the intended use. The surface projections can be oriented relative to one another to form an array and are preferably geometrically disposed relative to one another in a pattern wherein at least a portion of the projection is aligned along a longitudinal, horizontal, diagonal, or curved line. Further, it is appreciated that the surface of the present invention can be useful with spinal implants of various configurations, including configurations wherein at least one of leading end, trailing end, and sides of the spinal implant is curved. By way of example and not limitation, the leading end, trailing end, and sides of the spinal implant can form an oval, an oblong, or a circle. For example, Fig. 1B shows an implant 100" having a leading end 102", a trailing end 104", and a sidewall 110" forming a circle. As shown in Figs. 8-11, a second embodiment of the surface configuration of the present invention is generally referred to by the numeral 220. Surface configuration 220 includes surface projections 222 to facilitate insertion of implant 100 into an implantation site while resisting expulsion of implant 100 in a direction opposite to the direction of insertion. Each of surface projections 222 has an angled forward facet 224 directed at least in part toward leading end 202 of implant 100 and a rearward facet 226 directed at least in part toward trailing end 204 of implant 100. Forward facet 224 has a length greater than the length of rearward facet 226. Rearward facet 226 has a slope that is steeper than the slope of forward facet 224. In this embodiment, the base of rearward facet 226 forms an angle of approximately 45 degrees with respect to upper and/or lower surfaces 206, 208 of implant 100. Each one of surface projections 222 has a left side facet 232 and a right side facet 234 directed toward the sides of implant 100, and forward facet 224 and rearward facet 226.

Please replace the paragraph bridging pages 19 and 20 of the specification with the paragraph below:

The spinal implants of the present invention can be for the purpose of achieving fusion. The upper and lower surfaces of the fusion implants can include at least one opening, each in communication with the other, to permit for the growth of bone from vertebral body to adjacent vertebral body through the implant. The implant can have an internal chamber and may also have an access opening for accessing the internal chamber, in which case the implant can further have a cover such as a cap to close the access opening at least in part. For example, Fig. 1A shows an implant 100' having a leading end 102', a trailing end 104', a sidewall 110', and a cap 101'. Openings in the upper and lower surfaces of the implant can communicate with the internal chamber to permit further growth of bone from vertebral body to adjacent vertebral body through the implant. The internal chamber can contain bone growth promoting materials, including but not limited to, bone, bone morphogenetic proteins, hydroxyapatite, and genes coding for the production of bone. The implants of the present invention can be formed of a material that intrinsically participates in the growth of bone from one of the adjacent vertebral bodies to the other of the adjacent vertebral bodies.

Please replace the second full paragraph on page 20 of the specification with the paragraph below:

While the implant shown in Figs. 1, 2, and 3 is an interbody spinal fusion implant, it is appreciated that the surface configuration of the present invention is applicable to any interbody spinal fusion implants, including but not limited to, an artificial disc or motion preserving device 100" (Fig. 1C) having opposed surfaces incorporating the present inventive teachings for engaging each of the adjacent vertebral bodies.